Using 21st Century Technology In Online Business Education

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ABSTRACT

The challenges for education in the 21st century are fundamentally the same as they were in each of the past centuries – holding on to what is of value while discovering and developing what adds value to both teaching and learning. While the future is difficult to predict, the seeds of the future can be seen in the behaviors of the present. Obviously technology will play an even greater role in future education no matter how much and how quickly technology changes. Of greater importance than technology is the thinking needed for knowing how to use technology for advancing education for both students and instructors. Identifying the shifts in behavior that people are experiencing today provides clues on the practices that will be common tomorrow. Basic changes in education include the following: (1) moving from an instructor-centered paradigm focused on teaching to a learner-centered model focused on learning; (2) shifting from an emphasis on textbooks as a preferred source of knowledge to the use of technology as the primary tool for acquiring information and ideas; (3) advancing from knowledge to know-how exemplified in the differences expected from the cognitive, behaviorist and constructivist approaches to learning; and (4) sharing responsibility for learning through increased interaction and continuous communication between and among all individuals engaged in becoming educated persons. Technology, though it may be the key tool for facilitating these changes, has its limitations as well as its advantages, as any instructor knows when comparing face-to-face classroom lecturing with virtual asynchronous online discussions. Today's students are techno-savvy and may be considered the "Wi-Fi Generation." In the School of Business at National University, the second largest not-for-profit university in California, a blended approach to learning has been adopted in the accelerated one-month format used for its online education program. This paper explores the effects of some new technological options which were recently provided to marketing students in order to make their online learning experience more exciting and meaningful. National University's online classes are offered on the eCollege platform. Students interact with each other asynchronously through discussion boards and synchronously in weekly chat sessions. Chat sessions had been offered in a text-based format, but the School of Business has invested in iLinc software which provides Voice over Internet Protocol (VoIP) capability. In iLinc, students can see and hear each other as well as the instructor in real time. The system allows application sharing, group web-browsing, the display of PowerPoint® slideshows, voting, and independent group work. Using this technology, the instructor acts as both a discussion moderator and a live lecturer. The traditional text-based chats are no longer used due to the high student acceptance and delight with the iLinc system. Outside of the virtual classroom, the marketing students were tasked to analyze and comment on the content of selected television shows. National University's students are adult learners who grew up passively watching television from an early age. These assignments were designed to get them to think beyond the surface entertainment to the underlying marketing and business messages given in these shows. For example, a graduate advertising class was assigned to comment on the reality show, The Apprentice, while an undergraduate class critiqued the Super Bowl advertisements. In both classes the students were told to look at these programs critically and share their comments with the class. The use of these current mass media presentations, (which afforded live action cases that demonstrated the immediate consequences of managerial actions), was shown to be very powerful. Overall, the students appear to thoroughly enjoy this addition of topical and "live" learning tools to their online learning experience. While not tested empirically as yet, these new classroom tools seem to increase student comprehension and retention of the course material.

Key Words: Online education, VOIP, Synchronous chats, Reality Television, Live case studies.

INTRODUCTION

The challenges for education in the 21st century are fundamentally the same as they were in each of the past centuries: holding on to what is of value while discovering and developing what adds value to both teaching and learning. While the future is difficult to predict, the seeds of the future can be seen in the behaviors of the present. Obviously technology will play an even greater role in future

education no matter how much and how quickly technology changes. Of greater importance than the technology itself is the thinking needed to properly use technology for advancing education for both students and instructors.

Identifying the behavior trends linked to technological advances provides clues on the practices that will be common tomorrow.

In order to explore the impact of technology on education an explanation into the impact on education is helpful. The basic changes in education today include the following:

- Moving from an instructor-centered paradigm focused on teaching to a learner-centered model focused on learning; exemplified by the differences in cognitive, behaviorist and constructivism theory,
- Shifting from an emphasis on textbooks as a preferred source of knowledge to the use of technology as the primary tool for acquiring information.
- Advancing from knowledge to know-how exemplified in the differences expected from the cognitive, behaviorist and constructivist approaches to learning.
- Sharing responsibility for learning through increased interaction and continuous communication between and among all individuals engaged in learning.

The School of Business and Management at National University, the second largest not-for-profit university in California, utilizes a blended approach in its accelerated one-month format for both on-site and online education. This blended approach utilizes at least three significant learning theories.

- Cognitivism: thought-based learning and information processing, is best taught through the Socratic method.
- Behaviorism: learning based on measured and observable changes in behavior. This type of learning is based on theories of Pavlov, Watson, and Skinner and is incorporated into each course design. Each course in the School of Business has six to eight measurable learning outcomes. All instructors are tasked with teaching to the learning outcomes rather than parroting the text materials. Textbooks only serve as supplemental aids in achieving the learning outcomes. Weekly tests and examinations provide the capability of measuring the outcomes.
- Constructivism: a student-centered learning theory in which the student must determine what needs to be learned in order to solve a problem based on his or her previous experiences. Evaluation is based on performance of learner-assessment and self-evaluation as well as homework assignments (Mergel,1998).

Today's students are techno-savvy and may be considered the "Wi-Fi Generation" (www.webopedia.com). Thompson (2005) states,

The World Wide Web is the largest resource of information in the whole world and whatever your needs the Internet can provide. What started as a bubble has soon become a massive tidal wave and online education is one of the areas that is still increasing, probably more than ever. (para.1)

The Sloan Foundation's 2005 report, *Growing by Degrees:* documents that online education has now become part of the mainstream of university education. For example, the report includes the following findings: The number of students taking at least one online course grew 18.2 percent in 2004 to 2.35 million students.

- When schools were questioned on the role of Online education in their Long Term Strategy, 53.6% responded that it was critical
- 65 percent of schools offering graduate face-to-face courses also offer graduate courses online.
- 63 percent of schools offering undergraduate face-to-face courses also offer undergraduate courses online.
- Among all schools offering face-to-face master's degree programs, 44 percent also offer masters' degree programs online.
- 43 percent of business schools also offer online business degrees
- Roughly one in six students enrolled in higher education- about 3.2 million people took at least

- one online course in Fall 2005
- Online education appeals to a different type of student from those who do face-to-face instruction.
- More than 96 percent of the very largest institutions (more than 15,000 total enrollments) have some online offerings, which is more than double the rate observed for the smallest institutions.
- Online students tend to be older, and often hold additional employment and family responsibilities, as compared to the more traditional student this matches the Demographics of the NU student; working adult average age 33.3 years.(NU Annual report 2005)

Bates and Poole (2003) state;

Managing teaching workload is the most difficult and critical issue in the use of technology for teaching in higher education. The effective use of technology in any work environment requires major changes in the organization of work. Basically, teaching with technology is more work for the instructor than teaching face-to-face, at least initially, thus more work has to go into the 'front-end' of teaching - design and development - but with careful management this can be accompanied by some savings of time in the delivery of courses. One reason why educational technology often fails is that teachers try to carry over the predominant styles of the classroom to the new media, rather than developing new formats that exploit the unique features of the medium or technology. At the same time, presenting teaching in new ways will require students also to approach the learning task differently. They continue, the more different ways we can learn about a subject or topic, the more deeply we are likely to understand. Thus one immediate advantage of using different media and technologies is that they allow us to represent the world in different ways.

Technology, though it may be the key tool for facilitating these changes, has its limitations as well as its advantages, as any instructor knows when comparing face-to-face classroom lecturing with virtual asynchronous online discussions. (Sloan report, 2004)

- 40.7% of schools offering online courses agree that "students are at least as satisfied" with their online courses, 56.2% are neutral and only 3.1% disagree
- Medium and large schools strongly agree (with less than 3% disagreeing).
- The smallest schools (under 1,500 enrollments) are the least positive, but even they have only 5.4% disagreeing compared to 32.9% agreeing.
- Doctoral/Research, Masters, and Associates schools are very positive, Specialized and Baccalaureate schools only slightly less so.

National University's online classes are offered on the eCollege® platform (www.ecollege.com) Students interact with each other asynchronously through discussion boards and synchronously in weekly chat sessions. The instructor acts as both moderator and lecturer and provides a constant virtual presence. Chat sessions had been offered in a text-based format, but the School of Business has invested in iLinc® software (www.ilinc.com) which provides Voice over Internet Protocol (VOIP) capability. In iLinc® students can see and hear each other as well as the instructor in real time. The system allows application sharing, group web-browsing, the display of PowerPoint® slideshows, voting, and independent group work. Using this technology, the instructor acts as both a discussion moderator and a live lecturer. The traditional text-based chats are no longer used due to the high student acceptance and success with the iLinc® system, which is a new technology. Little research has been done on the efficacy of using audio conferencing. Chen, Wu and Yang 2006 in their study find,"that for decision making tasks audio conferencing has a significant impact on cooperative learning satisfaction but not on learning performance."

VOIP (www.theopalgroup.com)

The third medium incorporated into the learning exercise is Television (TV).

National University's students are adult learners. Perhaps multiple generations have been raised on a menu of technology especially television from an early age. According to Nielsen (2006) the following are some alarming television statistics

- The Average American watches more than 4 hours of TV each day
- or 28 hour per week,
- or two months of non-stop TV-watching per year.
- In a 65 year life, that person will have spent nine years glued to the tube

With respect to FAMILY LIFE (Television and Health)

- Percentage of households that possess at least one television: 99
- Number of TV sets in the average U.S. household: 2.24
- Percentage of U.S. homes with three or more TV sets: 66
- Number of hours per day that TV is on in an average U.S. home: 6 hours, 47 minutes
- Percentage of Americans that regularly watch television while eating dinner: 66
- Number of hours of TV watched annually by Americans: 250 billion
- Value of that time assuming an average wage of S5/hour: S1.25 trillion
- Percentage of Americans who pay for cable TV: 56
- Number of videos rented daily in the U.S.: 6 million
- Number of public library items checked out daily: 3 million
- Percentage of Americans who say they watch too much TV: 49

Baby Viewing Habits

- 43 percent of babies younger than 1 who watch television every day, Kaiser Family Foundation (2006).

Outside the virtual classroom the marketing students were tasked to analyze and comment on the content of selected Television shows. These assignments were designed to aid students in thinking beyond the surface entertainment to the underlying marketing and business messages given in these shows as mentioned in constructivism.

From my own experience a graduate level advertising class was assigned to comment on the Reality TV show *The Apprentice*, a popular choice in business schools. Business schools which formally criticized Donald Trump for his managerial styles are now using fundamentals from his TV show. Leonard Green(2005) states, "It's a great program about Entrepreneurial challenges" and has fashioned an "Apprentice" like course at Babson College. Fox School vice dean Raj Chandran believes many of the lessons taught by "The Apprentice" match the values offered in business school: team-work, negotiation, communication, leadership, entrepreneurial spirit, and a desire to provide the best quality product on time, on budget, and in an ethical manner. "The Apprentice seeks what all employers look for in the candidates they hire," Chandran says. "To that extent—minus the glitz, glamour and the hoopla—the show is very realistic." BizEd (May/June 2005)

Another example, an undergraduate class critiqued Super Bowl advertisements. In both classes the students were told to look at these programs critically and share their comments with the rest of the class, thereby re4inforcing their learning through cognitivism.

CONCLUSION

The use of TV and the Internet are great supplements to the traditional textbook. The students enjoyed the interactive and current day nature of this entertainment used a case study. Watching the reality show was much more entertaining than reading a case study, which may tend to get boring, especially for the visual learner. A real-time case study is a refreshing approach to learning. The material is current, and it is more relevant and easily digested.

Theory can be applied to real-life business situations and debriefed.

Some students expressed the format fit their preferred learning style perfectly, provided practical (albeit often artificial) applications of marketing concepts, and is successful for both on-ground and online classes
The use of these current mass media presentations afforded live action cases that demonstrated the immediate consequences of managerial actions was very powerful.

Overall, the students appear to thoroughly enjoy this addition of topical and "live" learning tools to their online learning experience.

While not yet tested empirically, these new classroom tools seem to increase student comprehension and retention of the course material.

The use of TV and the Internet are great supplements to the traditional textbook. The students enjoyed the interactive and current day nature of the case studies. Students' comments included:

- Watching the reality show was and is much more entertaining than reading a case study, which may tend to get boring, especially for the visual learner.
- A Real-time case study is a refreshing approach to learning. The material is current, so it is more relevant and easily digested.
- Theory can be applied to real-life business situations.

Students today are all techno savvy, Online enrollment has increased significantly; VOIP and television programs offer new exciting alternatives to the learning environment and instructors now have some new tools to add to their teaching activities.

REFERENCES

1.   Allen, E. & Seaman, J. (2006). Entering the Mainstream: The quality and Extent of Online Education in the United States. Sloan Foundation. Retrieved August 13, 2007, from http://www.sloan-c.org/publications/survey/pdf/making_the_grade.pdf
2.   Bates, A. W. & Poole, G. (2005). Effective Teaching with Technology. Jossey Bass. Retrieved August 13, 2007,from http://www.batesandpoole.ubc.ca/chapter-3.html.
3.   BizEd May/June (2005).B Schools adopt the Apprentice. Retrieved August 13, 2007, from http://www.aacsb.edu/publications/Archives/mayjune05/p08-17.pdf
4.   Chen, C. C., Wu, J. & Yang, S. C. (2006). The efficacy of online cooperative learning systems; The perspective of task technology fit. Campus-Wide Information Systems. (23)(3), 112. Retrieved August 16, 2007 from Proquest http://proquest.umi.com/pqdweb?did=1127949221&Fmt=3&clientId=1506&RQT=309&VName=PQD
5.   Ecollege.com. (2007). Ecollege. Retrieved August 12, 2007, from http://www.ecollege.com
6.   Ilinc. (2007). Ilinc. Retrieved August 12, 2007, from http://ilinc.com
7.   Kaiser Family Foundation. (2006).The Media Family: Electronic Media in the Lives of Infants, Toddlers, Preschoolers, and Their Parents. Retrieved August 16, 2007, from http://www.kff.org/entmedia/upload/7500.pdf
8.   Mergel, B. (1998). Instructional Design & Learning Theory. Retrieved August 13, 2007, from http://www.usask.ca/education/coursework/802papers/mergel/brenda.htm

9.   National University. Annual Report 2005. La Jolla, California:
10.   Nielsen, A.C. (2007,). Television's Popularity Is Still Growing. Retrieved August 12, 2007, from http://www.nielsenmedia.com/nc/portal/site/Public/menuitem.55dc65b4a7d5adff3f65936147a062a0/?vgnextoid=4156527aacccd010VgnVCM100000ac0a260aRCRD
11.   Sloan Foundation. (2005). Growing by Degrees: Online Education in the United States. Retrieved August 13, 2007, from http://www.sloan-c.org/publications/survey/pdf/making_the_grade.pdf
12.   Sloan Foundation. Entering the Mainstream: The quality and Extent of Online Education in the United States. 2004-2005. Sloan Consortium, 2007.
13.   Television and Health. (2006) Retrieved August 12, 2007, from http://www.csun.edu/science/health/docs/tv&health.html#tv_stats
14.   Thompson, J. (2005). E-Learning: Why Choose Online Education? Retrieved August 16, 2007, from http://www.searchenginecollege.com/articles/2005/07/e-learning-why-choose-online-education.html
15.   The Opal group FACETS. Retrieved August 10, 2007, from http://www.theopalgroup.com/newsletter/Spring2006/techtalk.htm

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